Step 2. Cause Map

Safety Goal Impacted	

Environmental Goal Impacted	

Customer Goal Impacted	

High Cycle Fatigue

AND

Possible Solutions: Spare Shaft to be Solid and machined from Solid piece

| Production Goal Impacted | ← | Loss of Batch #344 | ← | Batch "Caked Up" | ← | Loss of Agitator | ← | Stub Shaft Broke | ← | Weld on Flange Broke | ← | Porosity Visible in Weld |

Evidence: Visual Evidence of batch being caked up on 7/13/2016

Evidence: Board Operator noticed loss of Amps on Agitator @ 18:45 on 7/12/2016

Evidence: See attached pictures.

Evidence: See attached pictures.

Evidence: Confirmed with CORE OpEx Machinery Lead Paul Pairmore.

AND

| Property Goal Impacted | ← | Loss of Reactor 18 Agitator Stub Shaft & Mechanical Seal |

Possible Solutions: Add to Job Aid: Perform NDE on all welds and entire shaft before new shaft is installed in service for all reactors. To take place during seal changes.

Lack of Penetration in weld

Evidence: Confirmed with CORE OpEx Machinery Lead Paul Pairmore.

Labor Goal Impacted	